



BIOSEARCH TECHNOLOGIES, INC.

MATERIAL SAFETY DATA SHEET

MSDS-101171

Section I. Chemical Product and Company Identification

Product Name: **TNP-KLH (Keyhole Limpet Hemocyanin)**
Catalog Number: T-5060
CAS Number:
Chemical Name: 2,4,6-Trinitrophenyl Keyhole Limpet Hemocyanin
Chemical Formula: $C_6H_3N_4O_6$ -KLH
Supplier: Biosearch Technologies, Inc. Business Phone: 415-883-8400
81 Digital Dr. Business FAX: 415-883-8488
Novato, CA 94949 Business URL: <http://www.biosearchtech.com>
In case of emergency call: **ChemTrec®**
800-424-9300 (U.S.)
703-527-3887 (International)

Section II. Composition and Information on Ingredients

Major Constituent: 2,4,6-Trinitrophenyl Keyhole Limpet Hemocyanin
CAS Number:
Toxicology Data: Not available
TLV/PEL: Not available

Section III. Hazards Identification

Acute Health Effects: No specific information is available in our database regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.
Chronic Health Effects: CARCINOGENIC EFFECTS: Not available
MUTAGENIC EFFECTS: Not available
TERATOGENIC EFFECTS: Not available
DEVELOPMENTAL TOXICITY: Not available
Hazards:

Section IV. First Aid Measures

Eye Contact: Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention. Treat symptomatically and supportively.
Skin Contact: After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin, particularly skin folds and creases, with running water and non-abrasive soap. COLD water may be used. Cover the irritated skin with an emollient. Seek medical attention. Treat symptomatically and supportively. Wash any contaminated clothing before reusing.
Inhalation: If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt, or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention. Treat symptomatically and supportively.
Ingestion: If the victim is not breathing, perform artificial respiration with a mouthguard. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Seek immediate medical attention and, if possible, show the chemical label. Treat symptomatically and supportively.

Section V. Fire and Explosion Hazard Data

Flammability:

Auto-Ignition: Not available

Flash Points: Not available

Flammable Limits: Not available

Combustion Products:

Fire Hazards: No specific information is available regarding the flammability of this compound in the presence of various materials.

Explosion Hazards: Risk of explosion by mechanical impact: Not available
Risk of explosion by static discharge: Not available
No additional information is available regarding the risks of explosion.

Fire Fighting Media and Instructions: SMALL FIRE: Use dry chemicals, CO₂, water spray or foam.
LARGE FIRE: Use water spray, fog, or foam. DO NOT use water jet.

Section VI. Accidental Release Measures

Spill Cleanup Instructions: In case of a spill and/or leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling Precautions:

Storage Conditions: +5°C, desiccated

Section VIII. Exposure Controls and Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fumes, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles, lab coat, dust respirator, boots, and thick chemical-resistant gloves. Suggested protective equipment might not be sufficient. Consult a specialist before handling this product.

Section IX. Physical and Chemical Properties

Solubility:

Molecular Weight:

Physical Appearance: orange powder

Vapor Pressure:

Melting Point: °C

Boiling Point: °C at mmHg

Percent Volatile:

Section X. Stability and Reactivity Data

Reactivity: This material is stable when stored as directed (see section VII).

Section XI. Toxicological Information

RTECS Number: Not available.

TLV/PEL: Not available

Routes of Exposure: Eye/skin contact, Ingestion, Inhalation

Toxicity Data: Not available

Section XII. Ecological Information

Ecotoxicity: Not available.

Environmental Fate: Not available.

Section XIII. Disposal Considerations

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state, and local regulations when disposing of this substance.

Section XIV. Transport Information

Transportation: DOT Classification: Not a DOT controlled substance (United States).
PIN Number: Not applicable
Proper Shipping Name: Not applicable
Packing Group (PG): Not applicable

Section XV. Other Regulatory Information

Other Regulatory Information: TSCA Chemical Inventory (EPA): This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada): Not available
EINECS Number (EEC): Not available
EEC Risk Statements: Not available
Japanese Regulatory Data: Not available

Section XVI. Other Information

Biosearch Technologies' laboratory chemicals are for research purposes only and are not intended for use as drugs, food additives, household, or pesticides. The information herein is believed to be correct, but does not claim to be all-inclusive and should only be used as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that those are the only hazards that exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods as the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.